Neighborhood Traffic Management Plan

SR 520 Montlake Phase Update

MARCH 2017








WSDOT

Seattle Department of Transportation

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Seattle Department of Transportation

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Executive summary

Montlake Boulevard is a principal arterial that provides connectivity between Seattle neighborhoods, institutions, parks, and activity centers such as the University of Washington, Seattle Children's Hospital, U-Link light rail station and the Washington Park Arboretum. Today's land use, population and resulting traffic demands have led to congestion throughout the Montlake neighborhood. Both population and employment are anticipated to continue growing within the Seattle area in the coming years. Keeping people and goods moving to and through the Montlake area is critical to the livability of the neighborhood, the city and the Puget Sound region.

What is the Neighborhood Traffic Management Plan?

Starting in 2018, construction crews will begin working on the SR 520 Montlake Phase, work expected to last for approximately four to five years. The Montlake Phase will include a new Montlake interchange, lid and land bridge, and the completion of the second half of the SR 520 west approach bridge. This phase of the project will make changes to how motorists connect between city streets and SR 520. During Montlake Phase construction, there will be disruptions for drivers, bicyclists, walkers and transit riders traveling through the neighborhood. The Montlake Neighborhood Traffic Management Plan (NTMP) identifies traffic control and management measures implemented by the City of Seattle and WSDOT that can support people traveling through Montlake Boulevard and the surrounding neighborhoods during SR 520 construction and beyond.

This NTMP also fulfills a commitment by the City and WSDOT to enhance safety, connectivity and livability in the Montlake Boulevard corridor for all travelers. This commitment is outlined in the 2011 SR 520, I-5 to Medina: Bridge Replacement and HOV Project Vision and Coordination Memorandum of Understanding (MOU).

WSDOT and the City of Seattle coordinated to develop an NTMP report for the SR 520 West Approach Bridge North project, published in 2014. The Montlake Phase update of the NTMP builds on the West Approach Bridge North version by including updated traffic information and public feedback. This report will also present a list of potential traffic management measures on local streets and future City of Seattle projects in the Montlake area. More detail on these traffic management measures is provided in Chapter 4. WSDOT and the City look forward to discussing the potential traffic management measures with the community, and updating the list of measures based on public feedback.

NTMP Objectives

Identify traffic-related concerns in the Montlake neighborhood based on public feedback.

Propose measures to address these concerns before, during and after SR 520 construction.

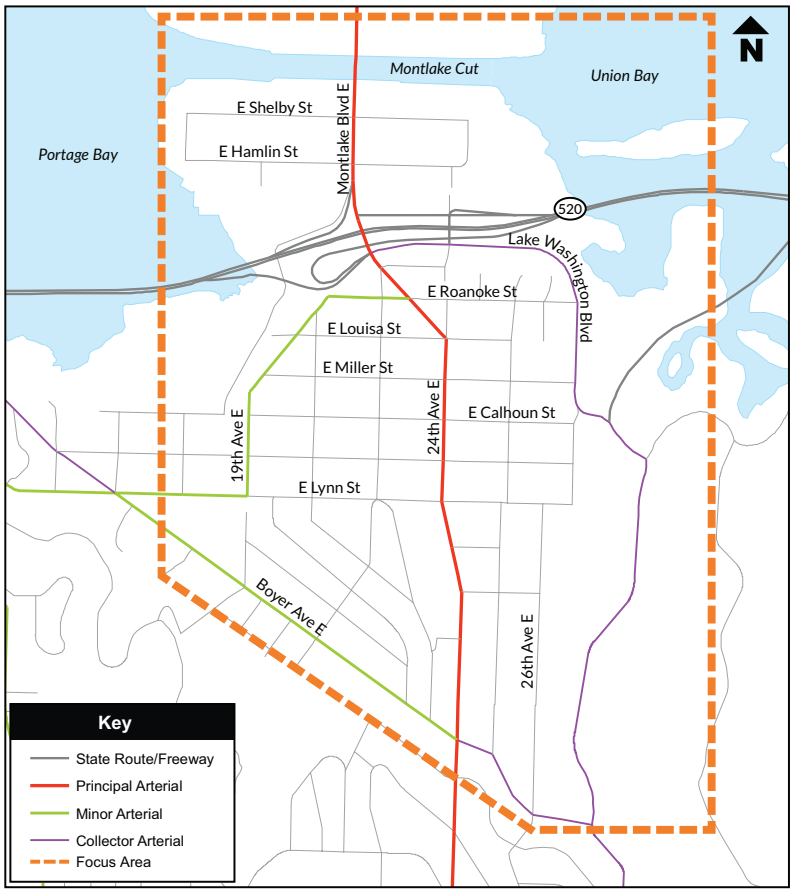
Describe long-term City of Seattle plans to improve mobility in the Montlake area.

NTMP Focus Area

For purposes of this NTMP, staff focused on Montlake Boulevard and the surrounding local streets. The focus area roughly extends north to the Montlake Cut, south to Boyer Avenue East, west to 19th Avenue East and east to Lake Washington Boulevard.

The NTMP is a living document and will be updated for future phases of SR 520 construction.

Neighborhood Traffic Management Plan Focus Area



Traffic in the Montlake area

Since tolling was implemented on SR 520 in December 2011, traffic volumes at the Montlake interchange ramps have decreased by approximately 8,000 vehicles per day. Volumes on Montlake Boulevard initially decreased but have now rebounded to pre-tolling levels. Even though traffic on SR 520 has declined, peak-hour volumes on Montlake Boulevard have remained consistent since tolling was implemented.

This report provides more detail on traffic volumes in Chapter 1. WSDOT and the City will continue to gather traffic data and use it to inform future NTMP updates.

Gathering public feedback

WSDOT and the City of Seattle have used extensive public feedback to inform the Montlake Phase update. The NTMP team has analyzed public comments collected through the SR 520 correspondence database, stakeholder engagement processes, city records, open houses, frontline neighbor meetings and through formal public comment periods between 2012 and 2016.

Based on this public feedback, WSDOT and the City have identified the key traffic-related concerns to be addressed in this NTMP. WSDOT and the City will continue to gather public input to inform and update the NTMP moving forward. This report provides a summary of public feedback in Chapter 2.

Next steps

Vehicles traveling southbound on Montlake Boulevard.

Based on feedback from the public, WSDOT and the City have developed a number of traffic-related measures for the Montlake neighborhood. Chapter 3 of this report describes how WSDOT will manage traffic during SR 520 construction and how the Montlake Phase project design will address mobility through the area after project completion. Chapter 4 describes planned and funded City of Seattle projects that address traffic in the Montlake neighborhood. Chapter 4 also includes a list of potential traffic-calming measures on Montlake neighborhood streets developed by the NTMP team. WSDOT and SDOT are seeking public comment on these local street measures. Using public feedback, WSDOT and SDOT will refine the measures and incorporate an updated list in the final version of the Montlake Phase NTMP, to be completed in advance of construction of the Montlake Phase.

To find out more about the NTMP and how you can provide comment, visit the Montlake Phase website.

Community Objectives

Improve traffic flow and mobility to and through the Montlake corridor.

Implement safe and efficient connections for bicyclists, pedestrians and transit riders.

Improve transit reliability in key corridors such as Montlake Boulevard.

Divert cut-through traffic away from nonarterial streets, and reduce speeds on neighborhood streets.

Implement travel demand management strategies to reduce traffic volumes.

Improve accessibility in and around the Montlake neighborhood.

Chapter 1: Background

Traffic traveling over the Montlake Bridge.

Montlake Phase NTMP goals

WSDOT and the City of Seattle recognize that roadway construction in a densely populated area can be disruptive. In the coming years, WSDOT and the City will be investing in a number of projects in the Montlake neighborhood, including SR 520 construction, the 23rd Avenue Corridor Project, and other local street enhancements. The NTMP represents WSDOT's and the City of Seattle's commitment to proactively minimize construction impacts and develop traffic management strategies that enhance safety and livability in the Montlake neighborhood throughout project construction. This NTMP report will offer potential traffic management measures through SR 520 project design, neighborhood traffic-calming, and long-term City projects and plans in the Montlake area.

City of Seattle & WSDOT Memorandum of Understanding

WSDOT and the City acknowledge that improving existing and future traffic in the Montlake area requires thoughtful collaboration and investment by both the City and WSDOT, and close coordination with other planned regional projects. This commitment was reaffirmed in the SR 520 I-5 to Medina: Bridge Replacement and HOV Project Vision and Coordination Memorandum of Understanding (MOU).

In fall 2011, the City of Seattle and WSDOT developed and finalized the MOU to direct future coordination regarding the SR 520 Program. As directed by the MOU, WSDOT and the City are working together to explore potential neighborhood traffic management solutions that could be implemented during design, construction, and operation of the SR 520 Program in Seattle.

This excerpt of section 2.3.3 of the MOU states that WSDOT and the City of Seattle intend to:

> *Collaborate to develop a Neighborhood Traffic Management Plan to catalog and develop solutions for community traffic concerns in the Montlake corridor and surrounding neighborhoods and to identify potential funding sources for projects consistent with recommendations and findings from the ESSB 6392 Final Workgroup Technical Report. The plan will define traffic management measures to proactively reduce Project construction effects and develop long-term traffic management strategies that work in conjunction with the Project's Preferred Alternative and existing City traffic management practices.*

SR 520 Program overview

The SR 520 Montlake Phase is one construction phase of the SR 520 Bridge Replacement and HOV Program. The SR 520 Program's construction began at I-405 in Bellevue and will extend improvements to I-5 in Seattle. The SR 520 Program includes the following projects completed and/or under construction: The Pontoon Construction Project, the Eastside Transit and HOV Project, the Floating Bridge and Landings Project and the West Approach Bridge North Project.

Completed, under construction, and fully funded projects of the SR 520 Program.

The Montlake Phase

The SR 520 Montlake Phase includes the construction of the West Approach Bridge South, Montlake lid and interchange, and a bicycle and pedestrian land bridge. Construction of the Montlake Phase is expected to begin in 2018. The West Approach Bridge South will connect eastbound traffic from Montlake to the new floating bridge. The project will also extend the dedicated transit/HOV lanes on the floating bridge and the Eastside to Montlake. This phase also includes removal of the existing Lake Washington Boulevard on-ramp to eastbound SR 520, and construction of an improved Montlake interchange.

The new Montlake interchange, which will include a lid, will have direct-access ramps for transit and HOV (3+ occupants), as well as new bicycle and pedestrian

Montlake Phase Design Elements

West Approach Bridge South

Montlake lid and improved interchange

Transit/HOV direct-access ramps with transit plaza on the lid

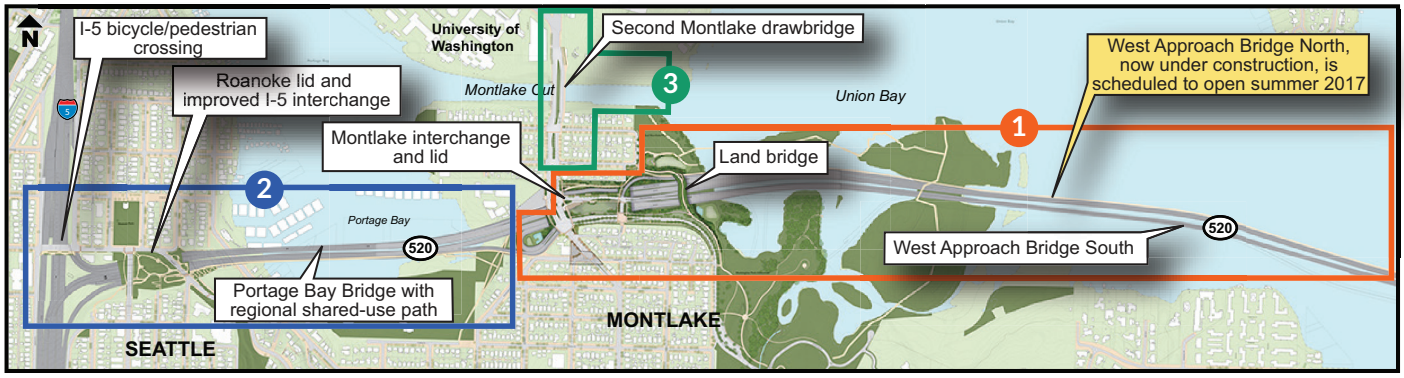
Bicycle and pedestrian land bridge

connections to existing regional and local trails and routes. The Montlake lid will be a hub for local and regional transportation connectivity, and will include multifunctional open spaces, urban trails, undercrossings, a regional shared-use path and transit connections. A new land bridge, to the east of the lid, will provide a new nonmotorized connection over SR 520 between the Arboretum and points north of the SR 520 corridor.

Conceptual rendering of a land bridge over SR 520, looking northeast toward Husky Stadium and Lake Washington.

Following completion of the Montlake Phase, future SR 520 corridor improvements in Seattle will include a new Portage Bay Bridge with dedicated transit/HOV lanes in each direction, a lid between 10th Avenue East and Delmar Drive East, an improved I-5 interchange and a second bascule bridge over the Montlake Cut.

These improvements have all been funded for construction. WSDOT will continue to coordinate with the City of Seattle and update this NTMP as additional corridor phases are designed and constructed. The graphic on the following page illustrates the remaining phases of the SR 520 Program.



PHASE 1: Montlake Phase
Construction to begin in 2018
Estimated duration: 4-5 years

PHASE 2: Portage Bay Phase
Estimated to begin in approx. 2020-2022
Estimated duration: 6 years

PHASE 3: Montlake Cut Crossing Phase
Estimated to begin as early as 2024
Estimated duration: 3 years

Remaining SR 520 Program phases and approximate schedules.

City of Seattle projects

In addition to the SR 520 Program, the City will be undertaking projects to improve mobility and safety throughout the Montlake neighborhood in the coming years. In 2015 Seattle voters approved the Move Seattle transportation levy. The funding package included two bus rapid transit (RapidRide) lines that will serve the Montlake and Roosevelt/University areas. The City is also investing in the 23rd Avenue Corridor Improvements Projects Phase 3 that will extend from East John Street to East Roanoke Street. While Phase 3 is still in early planning and development stages, SDOT has begun to coordinate with the community to help refine the scope of the improvements. See Chapter 4 for more information about City projects and plans in the Montlake area.

Existing conditions

Montlake Boulevard is a key route connecting Seattle neighborhoods, institutions, parks and activity centers such as the University of Washington, Seattle Children's Hospital and the Washington Park Arboretum. Growing population and employment in the region have contributed to congestion throughout the Montlake corridor. The Puget Sound Regional Council predicts a 43 percent increase in population and a 30 percent increase in employment by 2030 for the area north of the Montlake Cut between Lake Washington and Puget Sound.

Key Takeaway

Link light rail ridership has increased 71 percent since the UW station opened.

North Seattle population predicted to increase by 43 percent by 2030.

North Seattle employment predicted to increase by 30 percent by 2030.

Transit operations

Passengers riding a route 43 bus headed to Montlake.

Public transit is the primary mode of transportation for many people within the NTMP focus area. A number of bus routes provide service north-south over the Montlake Cut and east-west across SR 520. Since the opening of the University of Washington light rail station in spring 2016, Sound Transit reports that average weekday ridership on Link light rail has increased by 71 percent. The new U-Link station offers a reliable and efficient option for Montlake residents to access downtown Seattle and points south. Future light rail service will reach Northgate and Bellevue by 2023.

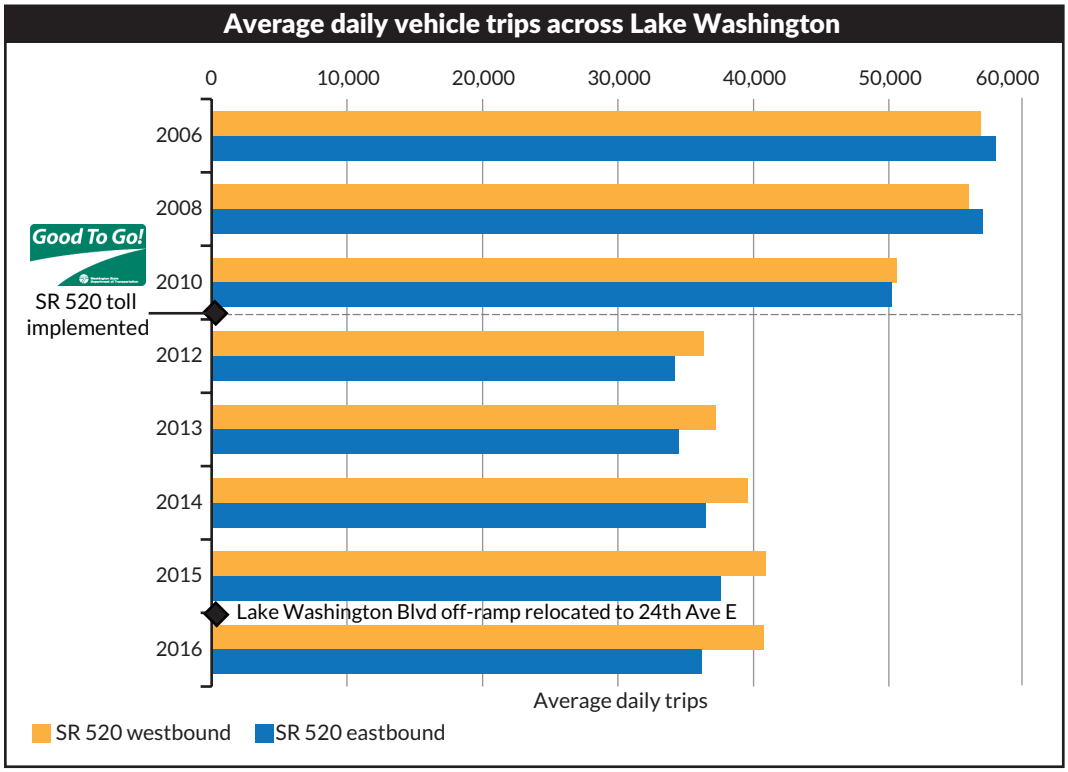
In an effort to improve transit operations in the area, the City has provided a dedicated transit lane and signal on eastbound Northeast Pacific Street to allow buses to bypass congestion at the Northeast Pacific Street and Montlake Boulevard Northeast intersection. A transit lane and transit-priority signal also exists on northbound Montlake Boulevard at the East Shelby Street intersection.

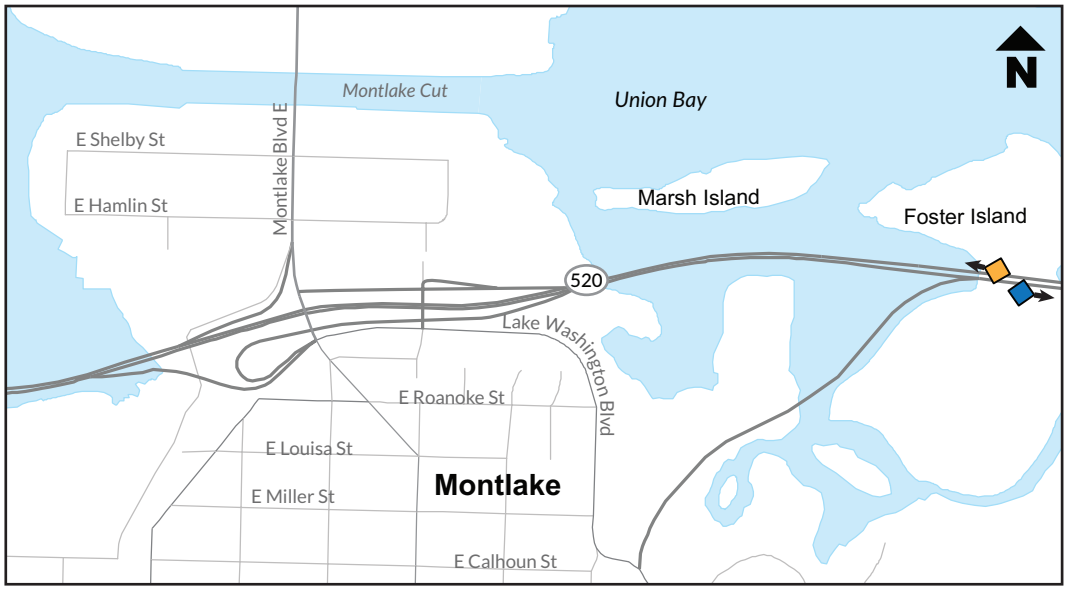
Traffic operations and volumes

Congestion issues in the Montlake area are caused by a number of factors, including residential and commercial growth north and south of the Montlake Cut, geographic constraints and traffic to and from the SR 520 interchange. Montlake Boulevard is one of only two arterials in northeast Seattle that cross the ship canal. All types of travelers, including drivers, bus riders, cyclists and pedestrians, must funnel onto either the University Bridge or Montlake Bridge to access jobs, homes and other destinations on either side of the Montlake Cut.

Current traffic data indicates that volumes on SR 520 and the Montlake interchange have declined since tolls were implemented on SR 520. The following graphics provide a more detailed picture of traffic in the Montlake neighborhood.

This graphic shows average daily vehicle trips across Lake Washington on the SR 520 floating bridge.





Key Takeaway

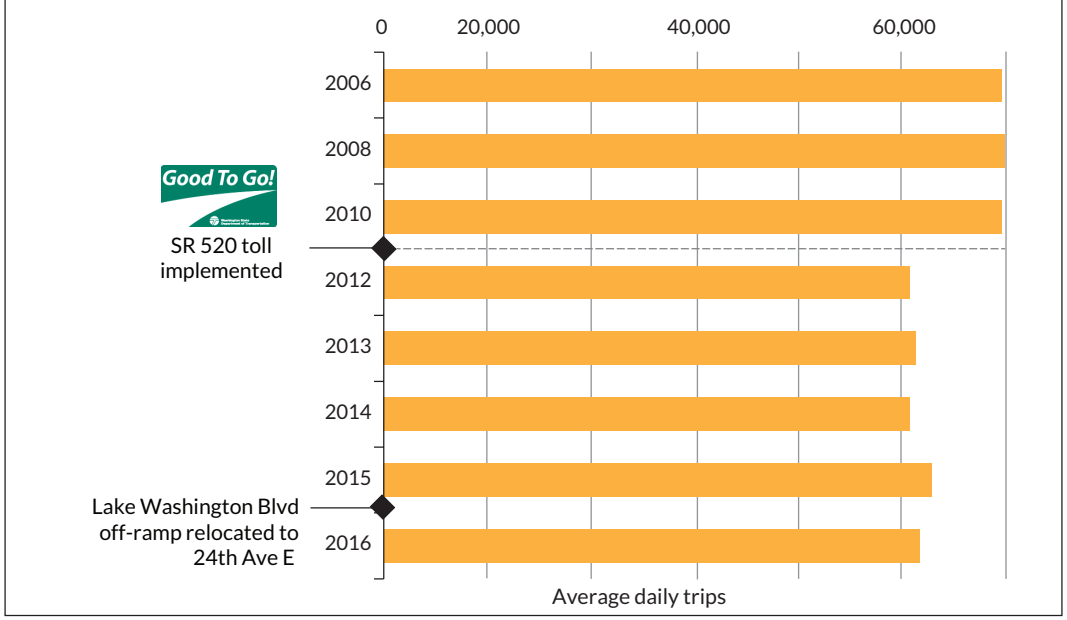
Daily traffic volumes on the SR 520 floating bridge have decreased by approximately 30 percent since tolling began.

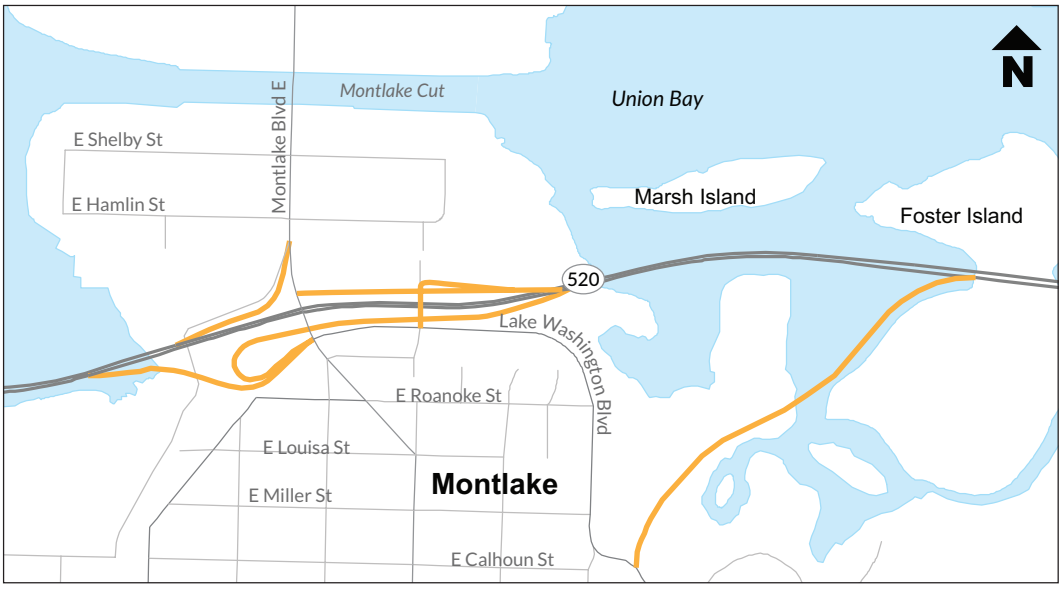
Key Takeaway

Traffic on SR 520 on- and off-ramps has declined by about 8,000 vehicles per day since tolling began.

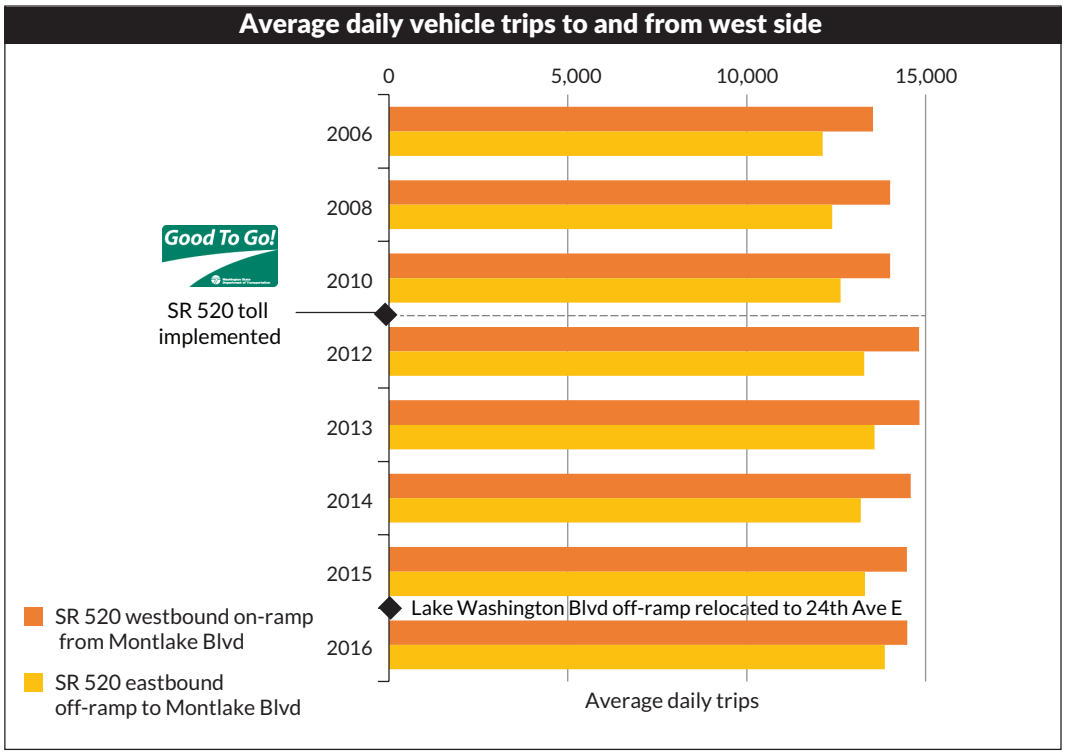
This graphic shows average daily vehicle trips on all ramps in the Montlake area. These volumes have dropped since tolling began, reducing SR 520's contribution to local street traffic.

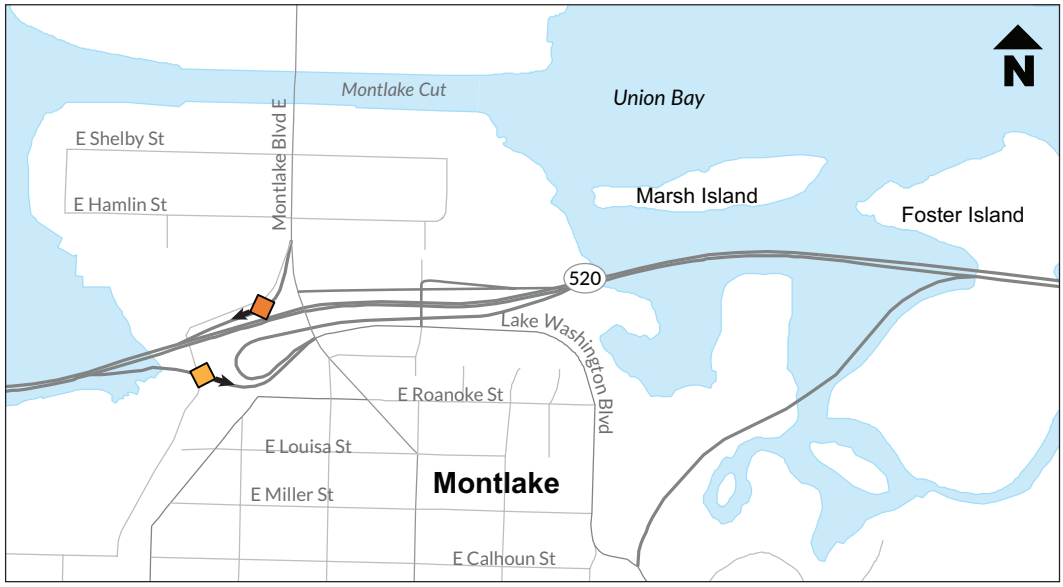
Average daily vehicle trips all ramps to and from Montlake





This graphic shows the average number of vehicles exiting eastbound SR 520 at Montlake interchange and traveling westbound toward I-5.





Key Takeaway

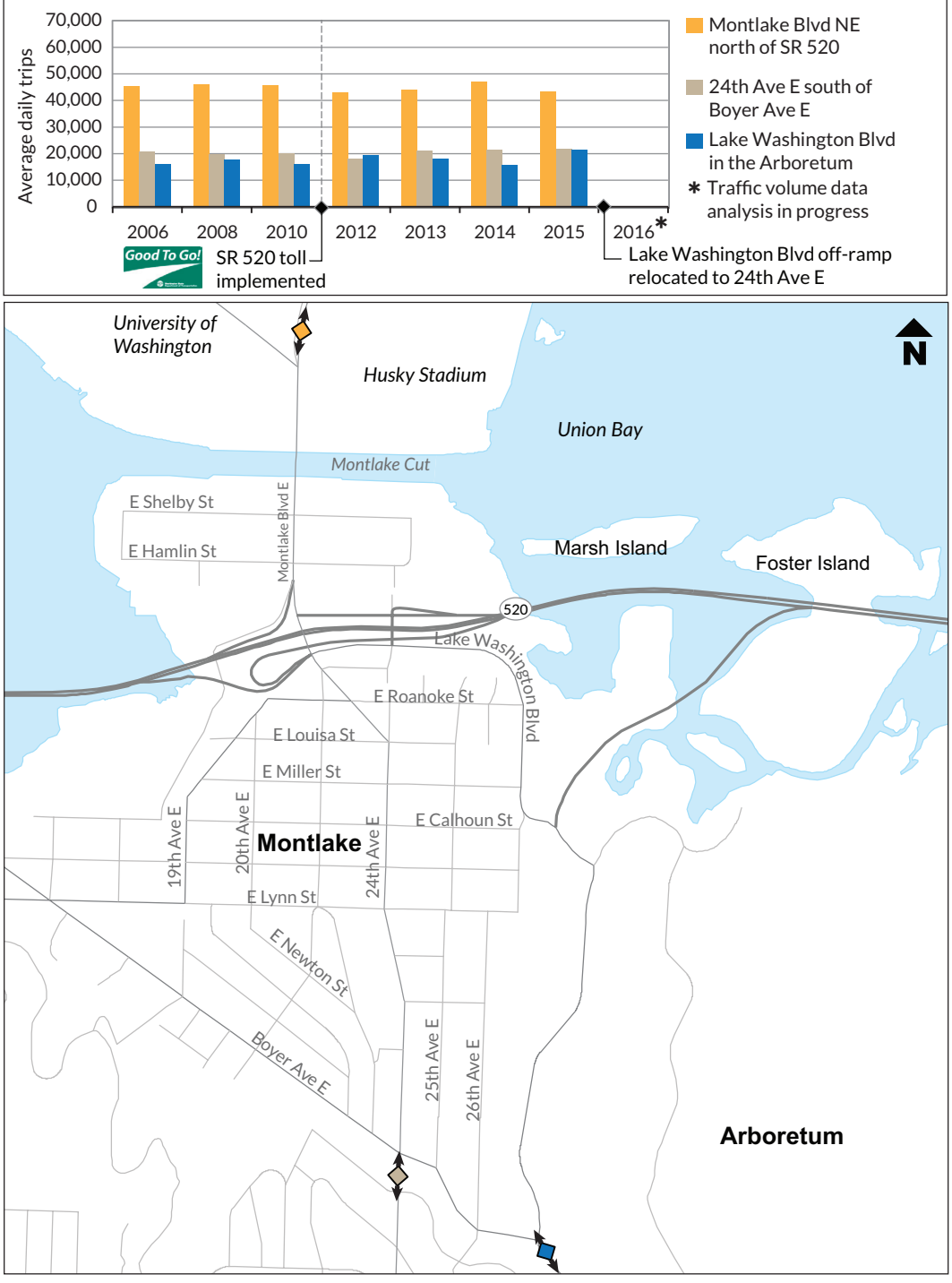
Although cross-lake travel has decreased since tolling, traffic exiting eastbound SR 520 at Montlake Boulevard and traffic moving westbound toward I-5 has increased slightly.

Key Takeaway

Montlake Boulevard traffic decreased slightly with the implementation of SR 520 tolling but has since returned to near pre-tolling volume. Peak-hour traffic volumes on Montlake Boulevard have remained essentially the same as the pre-toll period, with about 3,700 vehicles per hour crossing the Montlake Bridge.

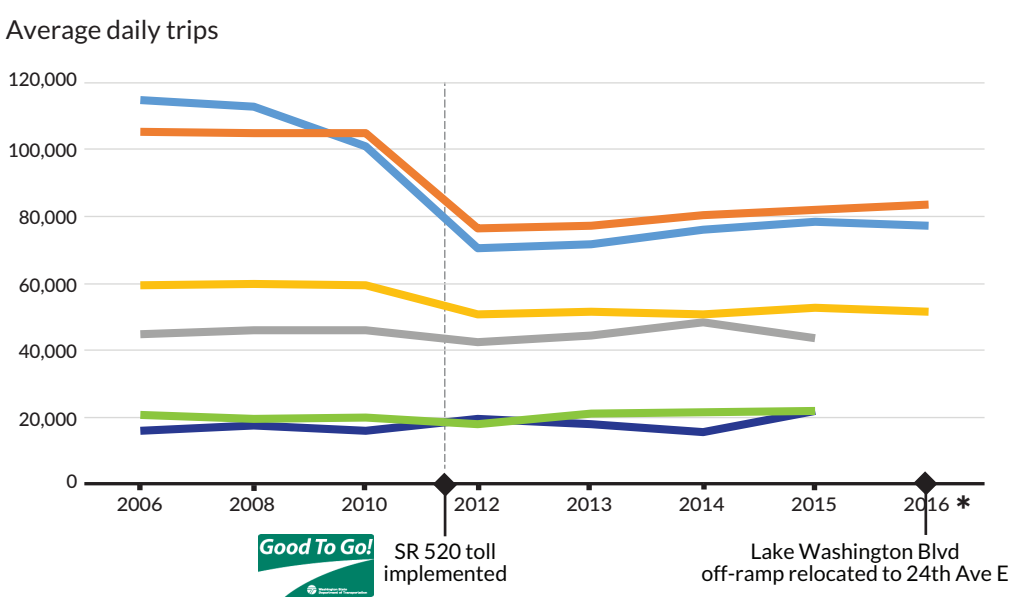
This graphic shows the average daily vehicle trips on Lake Washington Boulevard and Montlake Boulevard, the two major routes through the Montlake neighborhood.

Average daily vehicle trips on Montlake and Lake Washington Boulevard



This exhibit summarizes the information in the previous traffic volume charts, showing average daily trips on the SR 520 mainline, the on- and off-ramps, and the nearby City arterials.

Average daily vehicle trips in the Montlake area



Key Takeaway

Traffic volumes on the SR 520 mainline and Montlake interchange ramps decreased after tolling was implemented. Volumes on local arterials in the Montlake area decreased slightly after tolling began but have since increased to pre-tolling levels.

Chapter 2: Public involvement

Public outreach informs the NTMP

Public outreach is essential for any transportation project or traffic management program. Outreach has played an integral role in developing the SR 520 project design, as WSDOT has collected public feedback throughout the life of the project to gain more insight about the daily conditions, concerns, and desired outcomes within the corridor. The public feedback summarized in this section informs the solutions described in Chapter 3 and Chapter 4.

Community members at the June 28, 2016 Montlake Phase open house.

Records search of all SR 520-related public comments

The 2011 MOU requests that WSDOT and the City of Seattle "identify community traffic management concerns and issues through a records search and community process." The purpose of this activity was to understand in greater detail public concerns about traffic in and around Montlake Boulevard by analyzing comments from all sources of public feedback. To fulfill this commitment, the NTMP team gathered public comments from three main sources:

- **SR 520 correspondence database.** The database includes a total of 13,000 public comments on all project topics from email correspondence, phone calls to the project office, public event, and letters received between 2003 and 2017.

- **Stakeholder processes.** This includes more than 1,700 public comments on all project topics from the 2007-2008 mediation process, 2009 legislative workgroup process, 2010 ESSB 6392 workgroup and Arboretum processes, the 2011-2012 Seattle Community Design Process and the 2015 Final Concept Design Process.

- **Environmental process.** This includes 415 public comments made through the formal comment period on the 2010 Supplemental Draft EIS.

Coordination with the public

The City of Seattle and WSDOT agreed that public involvement was important in developing the West Approach Bridge North NTMP in 2013. The Montlake Phase NTMP update builds on that input by incorporating public comments gathered since construction of the West Approach Bridge North project began in 2014.

Public open houses

On June 28, 2016, WSDOT, with City of Seattle staff support, hosted the Montlake Phase design open house. The open house provided an opportunity for stakeholders to comment directly on the neighborhood traffic issues to include in the updated NTMP. WSDOT also held a two-week Online Open House, where stakeholders were able to submit project feedback.

Community members provide feedback to WSDOT staff at an open house.

Key Takeaway

Traffic operations are considered poor throughout the Montlake Boulevard area.

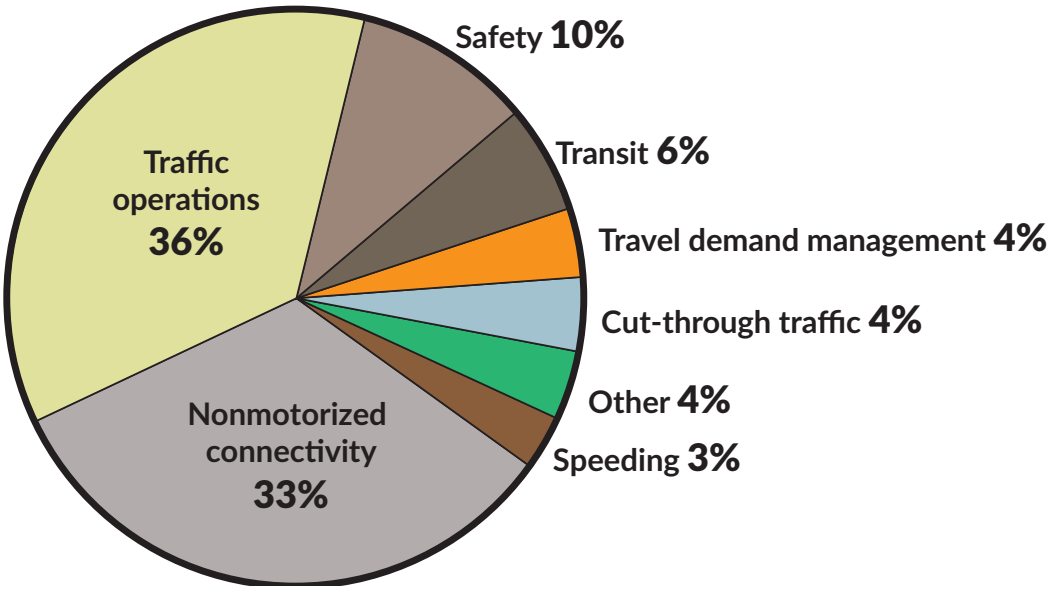
Nonmotorized travel is a key element in and around the Montlake Boulevard corridor and should be considered as an integral part of the transportation system.

Reducing speeds and cut-through traffic on neighborhood streets is a key concern

Transit is a key factor to improving mobility within the Montlake interchange area.

Key comment themes

In 2014 the SR 520 team completed a records search of comments related to local traffic in the Montlake area. In 2016, the project team ran an updated search of comments received from February 2012 to April 2016, which yielded 561 comments. Additionally, 179 traffic-related comments were collected at the June 28 open house, for a total of 740 comments. The comments varied in topic and detail. The team identified several key comment categories to inform this report. The following chart illustrates the percentage of comments within each category. The largest number of comments relates to traffic operations and nonmotorized connectivity.



Chapter 3: Projects completed or underway

Based on public feedback detailed in Chapter 2, WSDOT and the City have developed traffic control and management measures for the Montlake neighborhood before, during and after project construction. This chapter focuses on traffic and safety improvements associated with the SR 520 Program. In collaboration with the City, WSDOT has incorporated design elements to improve mobility and safety for all travel modes in the project area. WSDOT is committed to using construction best management practices to manage traffic during project construction.

How is the SR 520 Program managing traffic?

WSDOT has implemented a number of measures to actively manage traffic safety and flow on the SR 520 corridor and has partnered with other agencies to improve both the regional and local transportation system around the SR 520 corridor. This has been achieved, in part, through the following corridor traffic management strategies:

SR 520 corridor traffic management

Improvement	Benefit
✓ Incident response teams	Rapid response to clear incidents more efficiently within the corridor
✓ Intelligent Transportation Systems	Manages flow on the SR 520 corridor through variable speed-control signs and variable-message signs for driver information and decision-making
✓ Electronic tolling	Variable tolling redistributes traffic volumes on the corridor to nonpeak periods and improves travel times
✓ Transit/HOV lane extension and performance standards	Improves mobility and reliability for high-occupancy vehicles and transit

✓ completed

These improvements provide benefits to the traveling public by balancing traffic flows to minimize delays on the major highway. They also benefit transit travel by maintaining HOV bypass lanes at on-ramps, clearing incidents quickly and efficiently and maintaining traffic flow in the HOV lanes. WSDOT incorporated a number of traffic management measures into the West Approach Bridge North project. These improvements focused on maintaining traffic flow for vehicles using the SR 520 interchange, and reducing potential construction effects on local streets. WSDOT provided primary funding for the Montlake Triangle Project and traffic calming in the Arboretum as part of the SR 520 Program.

The Montlake Triangle provides a grade-separated crossing for pedestrians and bicyclists.

West Approach Bridge North Phase

(currently under construction, expected open to traffic summer 2017)

Improvement	Benefit
✓ Montlake Triangle Project (primarily funded by WSDOT)	Improves safety and efficiency for pedestrians, bicyclists and motor vehicles on SR 520 and Montlake Blvd by providing a grade-separated crossing for pedestrians and bicyclists
✓ Traffic-calming measures in the Arboretum (funded by WSDOT)	Improves safety and mobility for pedestrians and motorists through the Arboretum
✓ Added westbound lane on Lake Washington Blvd between 24th Ave E and Montlake Blvd	Improves capacity and flow through Lake Washington Blvd
✓ Redistributed lane widths on northbound Montlake Blvd between the westbound off-ramp to Montlake Blvd and E Hamlin St to accommodate transit operations and bicycle mobility	Improves transit capacity and reliability; bicycle safety and mobility
SR 520 regional shared-use path extended from the floating bridge to Montlake – opens in 2017	Creates new regional pedestrian and bicycle connection to and from the local trails in Seattle and the Eastside
Arboretum Loop Trail improvements, currently under construction (funded by WSDOT)	Improves pedestrian and bicycle safety and mobility through the Arboretum and future connections to SR 520 trails

✓ completed

Traffic management solutions during SR 520 construction

In addition to existing traffic management solutions, WSDOT and SDOT are working together to identify and implement solutions to traffic-related concerns during the construction of the Montlake Phase.

Montlake Phase - Construction traffic management

Improvement	Benefit
Open temporary lanes before closing existing lanes during construction; for example, adding a lane to eastbound SR 520 on-ramp and a second left-turn lane for northbound Montlake before closing the eastbound Lake Washington Blvd on-ramp	Maintains capacity of existing roadways during construction and accommodates the shift of traffic when the Lake Washington Blvd on-ramp is permanently closed
Minimize short-term lane closures, and limit necessary closures to nonpeak time periods	Supports traffic flow on Montlake Blvd and Lake Washington Blvd particularly during peak commute hours
Transit stop functions will continue except for short closures to accommodate construction activities	Supports transit mobility and reliability through construction
Construction information resources including a 24-hour construction hotline, web updates, and ongoing email updates	Construction information available for advance and real-time notification about construction activities and impacts

Similar to the WABN and Floating Bridge and Landings projects, WSDOT's Programmatic Agreement prepared under Section 106 of the National Historic Preservation Act stipulates that each phase of I-5 to Medina project construction will include a Community Construction Management Plan (CCMP).

The Montlake Phase CCMP will outline best practices and communication tools to minimize construction effects. The Montlake Phase CCMP will be updated and shared with the public in 2018, after a contractor has been selected.

Concerns monitored through construction

WSDOT and its contractor will also continue to coordinate with the City of Seattle on typical construction coordination efforts, such as traffic-control plans during construction and planning for street and lane closures as the design is finalized.

SDOT coordinates construction activity with contractors and agencies to minimize impacts for all modes of transportation in Seattle. SDOT, WSDOT and transit agencies track and coordinate construction and other activities through the Seattle Area Construction Look Ahead, which provides an overview of construction work and major events that will impact Seattle-area travel. This ongoing effort enables the city and agencies to anticipate and adjust high-impact construction activities to avoid or minimize impacts on travelers.

Improving traffic through SR 520 project design

WSDOT and the City have worked closely to integrate traffic management strategies into the design of the WABN phase and the Montlake Phase. Based on public and agency feedback, the Montlake Phase will provide the following traffic management measures.

Montlake Phase - WSDOT permanent improvements

Construction planned to begin 2018, with a 4- to 5-year duration

Improvement	Benefit
1 SR 520 transit/HOV direct-access ramps on Montlake lid	Improves transit/HOV access, capacity and reliability on SR 520 mainline and in the Montlake Blvd corridor
2 Dual left turns from northbound Montlake Blvd to the eastbound SR 520 on-ramp	Accomodates additional traffic with the closure of eastbound on-ramp from Lake Washington Blvd
3 Left turn from northbound Montlake Blvd to westbound SR 520 on-ramp	Improves traffic flow through Montlake Blvd
4 Sidewalk crossing distances reduced where possible throughout the Montlake interchange	Improves pedestrian and bicycle safety and mobility
5 Raised intersection at 24th Ave E and E Lake Washington Blvd	Improves pedestrian and bicycle safety and mobility
6 Signalized intersection at 24th Ave E and E Lake Washington Blvd	Supports traffic flow and reduces backups on SR 520 mainline, 24th Ave E off-ramp and E Lake Washington Blvd
7 Complete connection of regional shared-use path	Improves nonmotorized mobility and connectivity
8 Bicycle and pedestrian land bridge across SR 520 east of the Montlake lid	Provides a new nonmotorized connection between the Arboretum and points north
9 Upgraded traffic signal equipment	Allows forward compatibility with future adaptive signals
10 Enhanced crossing at Lake Washington Blvd E and E Roanoke St	Improves safety and mobility for pedestrians and bicyclists
11 Roanoke Plaza transit and pedestrian improvements at intersection of E Roanoke St and E Montlake Pl E	Improves transit connectivity and pedestrian mobility and safety

Planned and funded Montlake Phase improvements

Chapter 4: Potential local street measures

While Chapter 3 describes improvements associated with the SR 520 Program, Chapter 4 focuses on traffic-calming measures on local streets. This chapter discusses projects under development by SDOT, and long-term City projects and plans. The chapter also proposes a list of potential measures, developed by the NTMP team, to manage traffic in the Montlake neighborhood.

Potential traffic management measures on neighborhood streets

The list of potential measures was developed by SDOT and WSDOT staff to address public concerns, with a focus on slowing speed on local streets and enhancing safety for walkers and bikers. WSDOT and the City are seeking community feedback on the draft list of traffic-calming measures, including those listed on the following pages. Based on community and agency feedback, WSDOT and the City will include an updated list of traffic measures in the final Montlake Phase NTMP.

WSDOT and SDOT traffic engineers explore potential traffic-calming measures.

Neighborhood traffic-calming tools

The NTMP team considered a number of tools to calm traffic and improve safety on Montlake neighborhood streets. Potential locations for these traffic-calming improvements are identified on the following pages. SDOT has specific requirements of public support or a history of collisions to implement some of these tools. Because some of these treatments have the potential to impact emergency response time, installations on fire response routes require evaluation and approval by the Seattle Fire Department.

Traffic circles are effective at reducing speeds and the number and severity of collisions at intersections. When installed as a series, traffic circles can provide an overall traffic-calming effect along an entire street corridor. These traffic-calming benefits can also improve bicycle and pedestrian safety. Generally SDOT will support the installation of a traffic circle if there have been more than two collisions in the intersection and the traffic circle is not located on a designate fire response route.

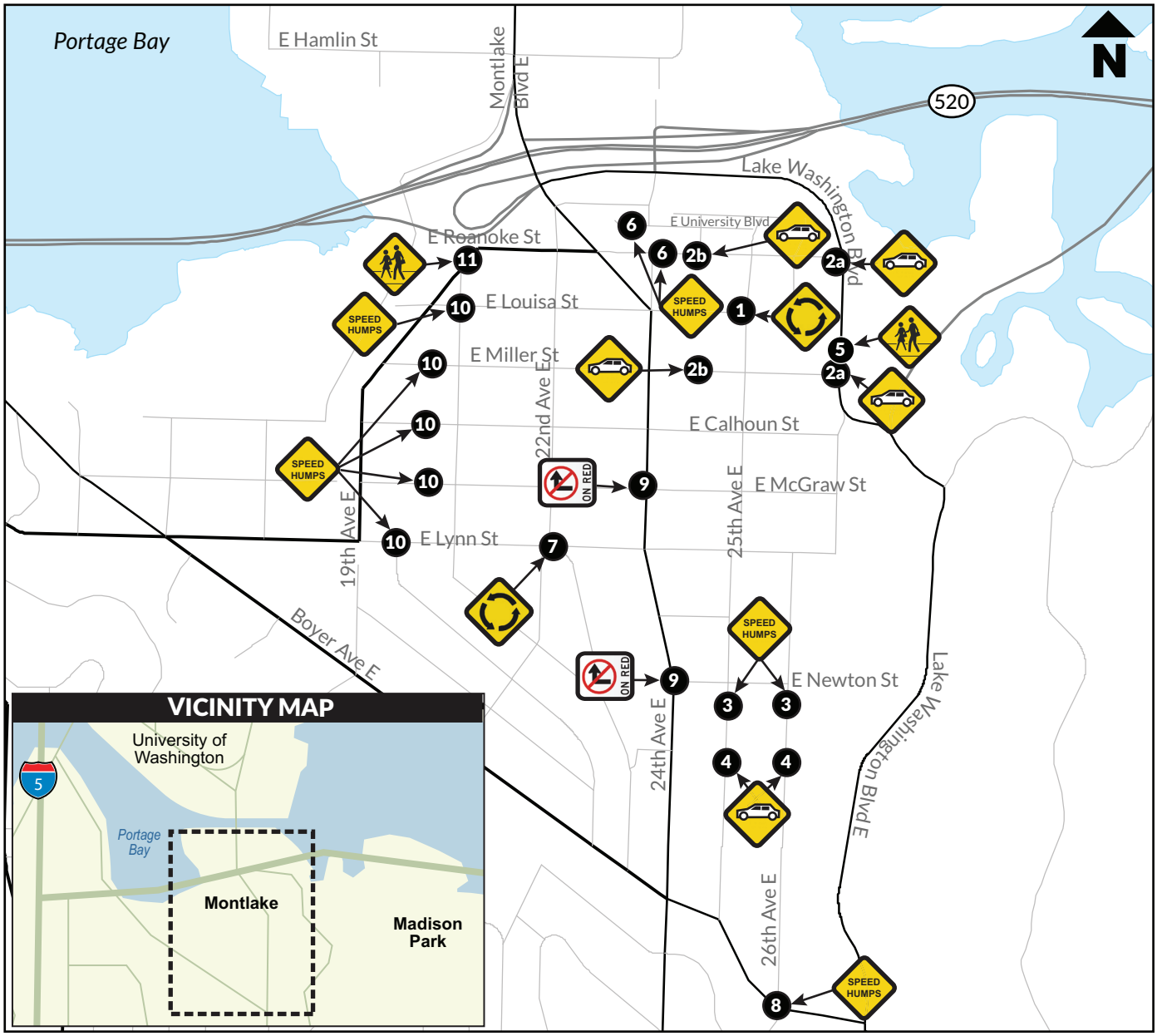
Speed humps can be effective at reducing speeds and diverting traffic to adjacent streets. Similar to speed humps, speed cushions are divided into sections. Speed cushions are more appropriate for arterial streets or nonarterial emergency routes. SDOT requires community support through a petition process in order to install speed humps and cushions.

Crossing enhancements, such as crossing beacons, reduce vehicle speeds approaching the crossing point, which help to improve safety and mobility.

Potential traffic management measures for the Montlake area

Location Description	Potential Treatment	Notes
Implemented before Montlake Phase construction		
1 E Louisa St and 25th Ave E	Traffic circle to slow speed and reduce cut-through traffic	Nonarterial fire route. Implementation dependent on fire response impacts
Implemented during Montlake Phase Construction		
2a Lake Washington Blvd E at E Miller St and E Roanoke St	One-way out curb extension to reduce U-turns and wrong-way traffic on Lake Washington Blvd	Impacts community circulation. Community support needed for implementation
2b E Miller St and E Roanoke St	One-way eastbound between 25th Ave E and Lake Washington Blvd E	Impacts community circulation. Community support needed for implementation
3 25th Ave E and 26th Ave E between Boyer Ave E and E Lynn St	Speed cushions to reduce speed	Community support needed for implementation
4 25th Ave E and 26th Ave E between Boyer Ave E and E Lynn St	Staggered parking on both sides of street to reduce speeds	Community support needed for implementation
5 Lake Washington Blvd E at E Miller St	Enhanced crossing, potentially with crossing beacon, to improve pedestrian and bicyclist safety	Community support needed for implementation
6 E University Blvd and E Roanoke St	Speed humps between Lake Washington Blvd E and 24th Ave E to reduce speed	Community support needed for implementation
Implementation determined based on monitoring during Montlake Phase construction		
7 E Lynn St and 22nd Ave E and 23rd Ave E	Compact roundabout to reduce speeds and cut-through traffic	Nonarterial fire route. Implementation dependent on fire response impacts
8 Boyer Ave E between Lake Washington Blvd and 24th Ave E	Speed humps between 25th Ave E and 26th Ave E to reduce speed	Designated fire response route. Implementation dependent on fire response impacts
9 24th Ave E and E McGraw St and E Newton St	Signalized, no turn on red during AM/PM peak, to reduce cut-through traffic	Community support needed for implementation
10 East-west streets between E Roanoke St and including E Lynn St	Speed humps between 19th Ave E and 24th Ave E to reduce speeds	Community support needed for implementation
11 E Roanoke St and W Montlake Pl E	Crossing improvements to improve pedestrian and bicyclist safety	Designated fire response route. Implementation dependent on fire response impacts

Potential traffic management measures for the Montlake area



Future City of Seattle projects in the Montlake area

Move Seattle investments

Passengers using RapidRide C route bus.

As part of Move Seattle, a transportation funding package passed by Seattle voters in 2015, the City is planning to enhance transit service by implementing RapidRide improvements between the Central District and University of Washington, via 23rd Avenue East and the Montlake Bridge.

Implementation is planned for year 2023, soon after the completion of the Montlake Phase. Similarly, SDOT is planning to implement a bus rapid transit corridor linking the Roosevelt neighborhood to downtown Seattle via the University Bridge, to be implemented in 2021. These services and associated capital investments will improve transit speed and reliability in the vicinity of the SR 520 corridor and will provide additional travel choices. Construction of these projects will be closely coordinated with the SR 520 Program.

23rd Avenue Corridor Improvements Project

During Montlake Phase construction, the City of Seattle plans to implement improvements on surface streets in the NTMP study area. The 23rd Avenue East Phase 3 project will include pavement rehabilitation and other street improvements, and will reach the SR 520 project limits at East Roanoke Street. SDOT is currently coordinating with the Montlake community to determine the extent of street revisions in the Montlake business district, and potential sources for supplemental funding. The 23rd Avenue East Phase 3 project will be coordinated closely with the Montlake Phase project to advance transportation and community priorities.

Long-term transportation planning in Montlake

SDOT plans and implements a range of strategies that address community concerns related to traffic management and travel options in the Montlake Boulevard and SR 520 vicinity. These plans focus on enhancing neighborhood environments for all travelers, including pedestrians, cyclists, and transit-users. Find out more about these and other transportation-related plans and initiatives here.

City of Seattle Traffic Plans and Programs	Plan Overview
Pedestrian Master Plan	Establishes policies, programs and design criteria to enhance pedestrian safety, mobility and access throughout the City
Your Voice Your Choice, Parks and Streets	Provides funding for small-scale transportation and parks improvements under $90,000
Neighborhood Street Fund	Provides funding for larger-scale community projects between $90,000 and $1 million
Transit Master Plan	Anticipates and plans for citywide transit needs through 2030
Intelligent Transportation Systems Strategic Plan	Develops guidelines for implementing various electronics, communications and automated traffic enhancements throughout the City
Neighborhood Traffic Operations	Helps to ensure safe traffic operations on Seattle neighborhood streets by responding to resident questions and concerns regarding speeding, traffic safety, signs and related issues
Montlake Corridor Transit Speed and Reliability Study	Identifies potential transit speed and reliability improvements in the Montlake area

City of Seattle ITS planning

The City of Seattle's Intelligent Transportation Systems (ITS) Strategic Plan provides a strategy for implementing ITS in Seattle to enhance mobility for all modes by increasing the efficiency and safety of transportation infrastructure. The City has implemented some of the recommended ITS improvements in the plan's Montlake Subarea and is currently planning to implement additional improvements in the Northeast 45th Street and 15th Avenue Northeast corridors that will benefit the Montlake corridor and will make ITS expansion in the Montlake corridor easier in the future.

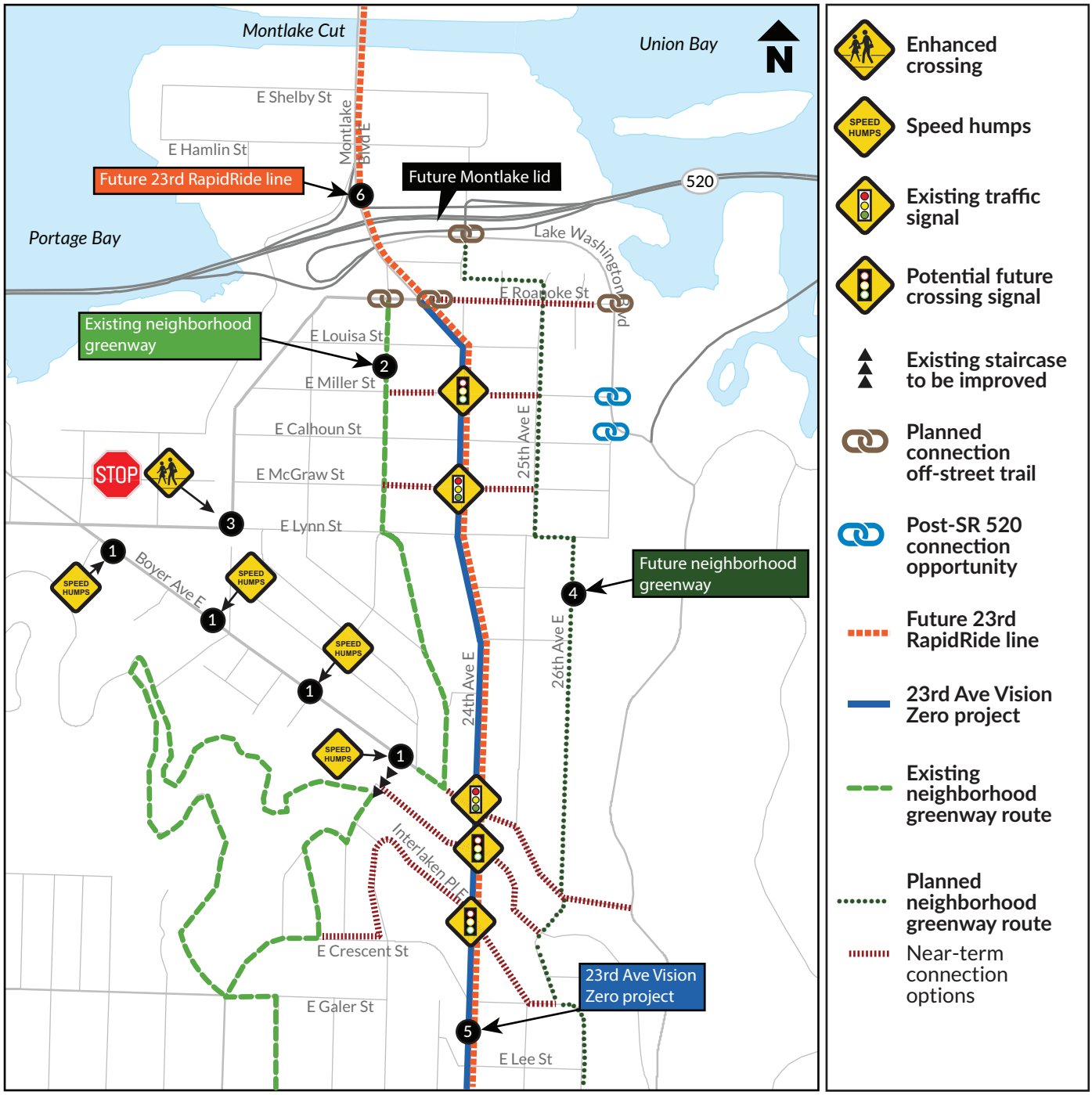
WSDOT has collaborated closely with SDOT on the Montlake corridor during the development of the SR 520 Montlake Phase design to provide interconnected signals and ITS communications. These elements will support future ITS technologies in the project area and will be forward compatible with expansion of SDOT's ITS and adaptive signal systems within the Montlake corridor.

Per the 2011 MOU, the City and WSDOT will continue to identify potential funding sources to implement additional elements of the City's ITS plan along the Montlake corridor. In 2016, the City and WSDOT applied unsuccessfully for a Federal Highway Administration grant called the Advanced Transportation and Congestion Management Technologies Deployment Initiative to help traffic, pedestrian and emergency vehicle movement in the Montlake area and extending north to the University District. The City and WSDOT will continue to look for future funding opportunities.

City of Seattle planned and funded measures in the Montlake area

Improvement	Benefit
1 Existing speed cushions along Boyer Ave E between 24th Ave E and E Lynn St	Reduces vehicle speeds
2 Existing neighborhood greenway on 23rd Ave E	Safer, calmer residential streets that discourage cut-through traffic
3 All-way stop at 19th Ave E & E Lynn St and raised crosswalk on E Lynn St	Organizes people driving through the intersection and discourages cut-through traffic
4 Planned greenway on or near 26th Ave E with connections to the greenway on 23rd Ave E	Safer, calmer residential streets that discourage cut-through traffic
5 23rd Ave Vision Zero Project	Improves mobility and safety while supporting transit service
6 23rd Ave RapidRide Line	Upgrades transit service to be more frequent and reliable

City of Seattle planned and funded measures in the Montlake area



Chapter 5: Conclusion

This NTMP addresses the next phase of SR 520, I-5 to Medina project construction, principally the West Approach Bridge South and Montlake lid (Montlake Phase). Since 2014, WSDOT and the City of Seattle have worked together to address traffic challenges associated with the West Approach Bridge North. This work has also helped to identify concerns to be addressed as part of Montlake Phase construction. Together, WSDOT and the City have considered potential transportation impacts associated with Montlake Phase construction, as well as analyzed and reflected on public input received over the entire life of the SR 520 Program.

WSDOT and the City of Seattle have incorporated several refinements into the Montlake Phase design that help offset potential traffic impacts and meet the needs of nearby neighborhoods. WSDOT and SDOT have also identified a variety of neighborhood street improvements and traffic-calming measures to further address potential impacts and community concerns. WSDOT is committed to constructing Montlake Phase improvements that are forward compatible with the City of Seattle's Intelligent Transportation Systems (ITS) strategic plan, which when implemented by the City will result in more efficient signal timing, improved driver information and improved nonmotorized connectivity. These strategies work in harmony with the City of Seattle's Neighborhood Traffic Operations program that provides citizens with a gateway to local roadway traffic-calming options.

The NTMP is a living document, and will be updated and modified as WSDOT prepares to design and build future phases of the I-5 to Medina project. WSDOT and the City are working together to ensure that as SR 520 corridor improvements move forward, the Montlake area will have a complete and functional Neighborhood Traffic Management Plan.

Next steps

The City and WSDOT would like to hear your feedback about the traffic management measures outlined in this plan. To find out more information about the NTMP and to provide comment, visit the Montlake Phase website.

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Neighborhood Traffic Management Plan

SR 520 Montlake Phase Update

WSDOT

Seattle Department of Transportation

Draft: 03/21/2017